

Studies on some Aphodiinae
(Coleoptera: Scarabaeidae)
from the Muséum d'Histoire naturelle
in Geneva

by

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With 12 figures

ABSTRACT

Three species of *Aphodius* Ill. are synonymized, two species are redefined and figured. The subgenus *Limaroides* Balth. is considered synonymous with *Phaeaphodius* Reitt. One species of the genus *Trigonoscelus* Petr. is described as new.

The material presented herein is a supplement to the previous papers (STEBNICKA, 1988; 1990) dealing with taxonomy and nomenclature of Aphodiinae. Among the specimens assembled in the collection of the Geneva Museum we found a new species of the subtribe Didactyliina (sensu PITTINO, 1984) and some species of *Aphodius* Ill., which are known only from the holotypes or, which are rarely represented in the European collections. The additional specimens examined, are deposited in the National Museum, Prague (NMP) and in the Institute of Systematics and Evolution of Animals, Kraków (ISEA).

***Aphodius* (*Phaeaphodius*) *kiulungensis* Balthasar**
(figs 1-2)

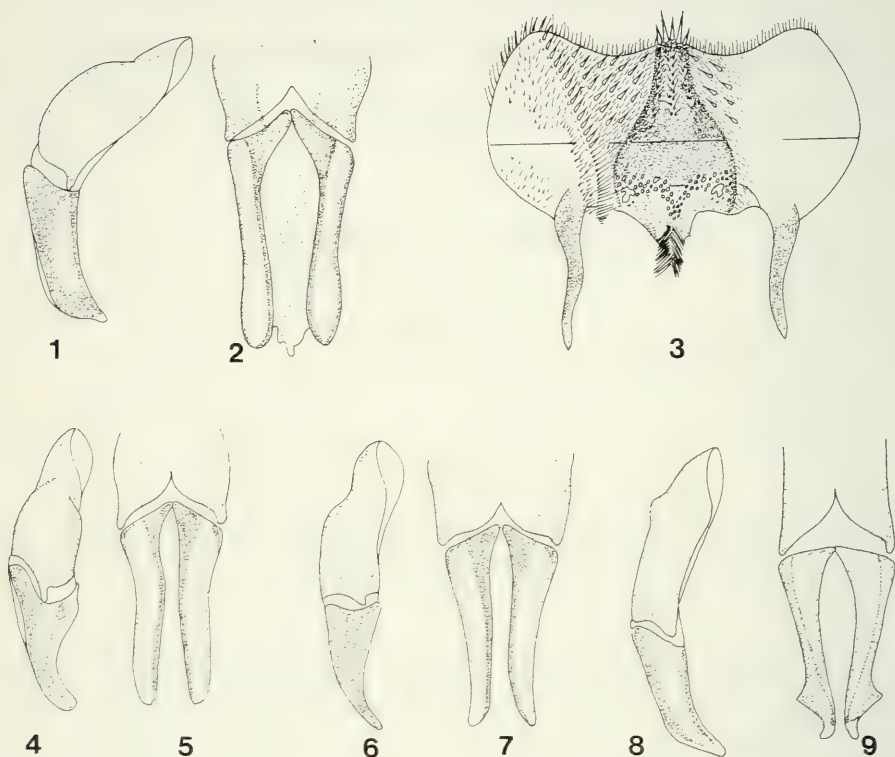
Aphodius (*Limaroides*) *kiulungensis* BALTHASAR, 1932.

Material examined. Holotype: China, Fukien (NMP); 8 specimens: China Kuatun, Fukien, 13-21.III.1946, leg. Tschung-Sen (MHNG).

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Complementary description. Fore body black, elytra brownish red, scutellum and elytral suture darkened. Posterior angles of pronotum widely truncate and slightly emarginate, base with a row of moderate punctures. Metatarsus one-third longer than the upper tibial spur and a trifle shorter than the next three joints combined; bottom apical spur of mesotibia in male thicker than the upper spur and slightly bent at the tip. Aedeagus as in figs 1-2.



FIGS 1-9.

1-2. *Aphodius (Phaeaphodius) kiulungensis* Balzh.: 1. aedeagus laterally; 2. paramerae dorsally. 3. *A. (Agoliinus) osseticus* Khnz.: epipharynx. 4-5. *A. (Agrilinus) inexpectatus* Balzh.: 4. aedeagus laterally; 5. paramerae dorsally. 6-7. *A. (Acrossus) superatratus* Nom. & Nak.: 6. aedeagus laterally; 7. paramerae dorsally. 8-9. *A. (Pharaphodius) rugosostriatus* Waterh.: 8. aedeagus laterally; 9. paramerae dorsally.

Remarks. *A. kiulungensis* Balzh. was originally described in the monotypic subgenus *Limaroides* Balzh. where it has remained ever since. It is very similar in general appearance and closely related to the members of *Phaeaphodius*-group, especially to one of the colored forms of *A. rectus* Motsch., from which it differs chiefly by lack of a continuous basal marginal line of pronotum and by the shape of the parameres.

***Aphodius (Agolinus) osseticus* Khnzorian**
(fig. 3)

Aphodius (Parammoecius) osseticus IABLOKOV-KHNZORIAN, 1972.

Material examined. One female: Turkey, Kars, Col entre Damal Posof, 2400-2500 m, 13.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG).

Complementary description. Length 6.3 mm. Body strongly convex, shining, carbon black, apex of elytra reddish black. Head rather large, clypeal margin obtusely rounded each side of moderate median emargination, frontal suture without tubercles, occiput slightly transversely cariniform. Pronotum widest at base, sides and base distinctly margined, surface punctures close, mixed very fine and larger. Scutellum triangular, punctate. Elytra convex, widest at middle, humeri strongly and sharply dentate, striae moderately impressed with fine and shallow punctures; intervals slightly convex, finely punctate. First posterior tarsal segment nearly equal in length to the upper tibial spur and to the next three segments combined.

Epipharynx. Epitorma and tormae well sclerotized; the bristles of the chaetoparia and chaetopodium the same size, rather short and thin; the remaining setae of paria and pedium short and thin, very closely distributed.

Remarks. *A. osseticus* is most closely related to Alpine *A. satyrus* Reitt., differing primarily by the shape of elytra and by presence of very strong humeral denticles. The species has never been treated after its original description presented in Cyrillic and referring to a single male specimen collected in Georgian SSR (SE Ossetian Autonomous Oblast), at 2400 m of the Greater Caucasus. The female specimen was collected in Turkey near USSR line, about 40 mi SW away from the type-locality.

***Aphodius (Agrilinus) inexpectatus* Balthasar**
(figs 4-5)

Aphodius (Carinaulus) nigrocarinatus Nikolajev, 1979, syn. nov.

Material examined. 6 specimens: North Korea, Prov. Hamgyong, N Unggi, 22.IV.1986, leg. Hwang Song Rin (MHNG); Onpho ad Chongjin, 21.VII.1959 leg. B. Pisarski (ISEA).

Remarks. This and the following two species described recently as new, belong to the group of East-Asiatic species of the "Manchurian type", concentrated in North China, south-eastern Siberia (Amur-Ussuri Lands, Primorskiy Kray), North Korea and North Japan. *A. inexpectatus* Balth. has been recorded from the North Korea, Primorskiy Kray (vicinity of Vladivostok) and Honshu (STEBNICKA, 1980).

***Aphodius (Acrossus) superatratus* Nomura & Nakane**
(figs 6-7)

Aphodius (Acrossus) arsenjevi BERLOV, 1989, syn. nov.

Material examined. 12 specimens: North Korea, Prov. Hamgyong, Chuul, 22.IV.1986, leg. Hwang Song Rin; Onpho ad Chongjin, 23.V.1974, Kvanmo-bong (Mt), 25.V.1974, leg Z. Stebnicka (MHNG, ISEA).

Remarks. The species occurs in the mountainous areas of Honshu, in the north-eastern provinces of Korea (STEBNICKA, 1980) and, according to BERLOV (1989), in the adjacent territories of Primorskiy Kray (Vladivostok, Khabarovsk).

Aphodius (Pharaphodius) rugosostriatus Waterhouse
(figs 8-9)

Aphodius (Pharaphodius) raddei BERLOV, 1989, syn. nov.

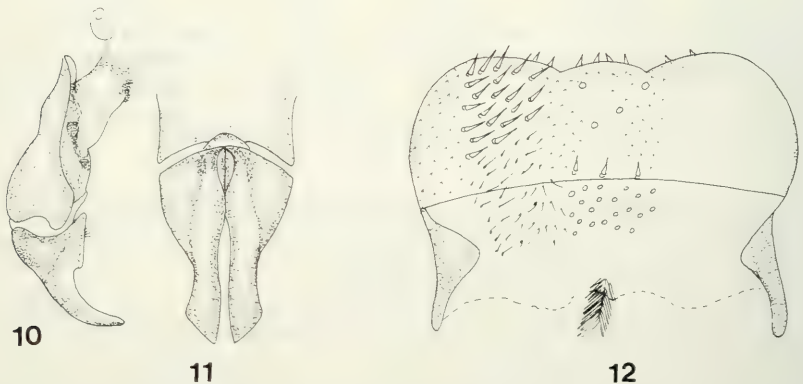
Material examined. 8 specimens: Ussuri, Spasskaya Obl., 10.IX.1917, leg. Y. Wuorentaus; North Korea, Prov. Hamgyong, N Unggi, 22.IV.1986, leg. Hwang Song Rin (MHNG, ISEA).

Remarks. The species is very similar to *A. subcostatus* Kolbe, both are distributed in the North and Central China, Korea and Japan (STEBNICKA, 1980), recorded recently from Primorskiy Kray by BERLOV (1989).

Trigonoscelus elbursensis sp. nov.
(figs 10-12)

Holotype ♂: Iran, Elburs, Lashkarah Valley, 1700 m, 19.III.1962, leg. J. Klapperich; Paratype ♀, the same data as holotype (MHNG).

Length 4.0-4.2 mm. Body slender, moderately shining; fore body, scutellum and lateral teeth of fore tibia yellowish brown, elytra and legs yellow. Head small, semi-circular, insignificantly convex at middle, clypeus distinctly reflexed anteriorly and feebly truncate, genae right-angled, somewhat exceeding eyes; frontal suture absent, surface punctures fine and close, more concentrated near anterior margin and in occipital area. Pronotum convex, widest at middle, sides widely rounded toward base; sides finely margined and minutely crenulate with rather long, scarcely distributed hairs; base slightly emarginate medially with minute marginal line; dorsal surface finely, uniformly punctate through with shallow, indistinct furrow in basal third. Scutellum triangular, rounded apically. Elytra slender, sides distinctly concave in basal one-third, humeri rounded and exposed; surface slightly alutaceous with scarce and short hairs at apex and near lateral margins; striae moderately impressed on the disc, vanishing at apex, nearly impunctate; intervals finely punctate, the punctures of five lateral intervals coarser and closer than



FIGS 10-12.

Trigonoscelus elbursensis sp. nov.: 10. aedeagus laterally; 11. paramerae dorsally; 12. epipharynx.

those of the discal intervals. Metasternum slightly alutaceous, midline impressed; abdominal sterna alutaceous, finely punctate and piliferous, pygidium apically with somewhat longer yellow hairs. Anterior tibia slender, nearly straight, lateral teeth strong, elongate and acute, terminal spur very short, bent downward. Meso- and metafemora rather wide, almost impunctate with scarce hairs; meso- and metatibiae flattened and widened apically with traces or transverse ridges, apical setae short, equal in length, apical spurs located near inner angle of apex; tarsi a trifle longer than the tibiae, with long setae; metatibiae somewhat thicker than mesotibiae, apical spurs short and robust, equal in length, diagonally truncate and about one-third shorter than metatarsus.

Male. Metasternum with shallow midline and short, scarce hairs. Aedeagus as in figs 10-11.

Female. Metasternum nude with deeper midline.

Epipharynx. Anterior part feebly sclerotized, posterior part membranous except the sclerites of tormae and mesophoba. The bristles of the chaetoparia moderately long and thin, irregularly distributed, epitoral area with small number of little differentiated sense organs.

Remarks. The new species is morphologically intermediate between *T. coelebs* Petr. and *T. afghanus* Petr.; it differs from both by the shape and sculpture of elytra. Aedeagus is similarly builded as in the members of the genus *Didactylia* d'Orb.; the poor epipharyngeal structures are nearly the same as those observed among the species of Aegialiini, although the labrum of *Trogonoscelus* is hidden and almost membranous.

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